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THE COLONIZATION OF PARASITES OF THE EUROPEAN CORN  
BORER IN THE UNITED STATES IN 1947<sup>1</sup>

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During the 1947 season 584,875 adult parasites of the European corn borer were released in the United States. The five species released were the tachinid Lydella stabulans var. grisescens R. & D., the ichneumonid Horogenes punctorius (Roman), the braconids Chelonus annulipes Wesm. and Macrocentrus gifuensis Ashm., and the chalcid Eulophus viridulus Thoms. The first four species were obtained from collections of overwintering corn borer larvae made in the Eastern States where these exotic parasites are now abundant. E. viridulus was received through the courtesy of the Dominion Parasite Laboratory at Belleville, Ontario, Canada.

Parasites were released in the following 16 States: Illinois, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Virginia, and Wisconsin. One colony of Macrocentrus gifuensis was shipped to Canada and released in New Brunswick. Table 1 summarizes the total releases of the 5 species in the various States.

The parasite liberations in 1947 bring the total number of exotic parasites released in the United States as an aid in control of the European corn borer, from the inception of this work to date, to 7,817,013. Table 2 summarizes all these releases by States and species to November 1, 1947.

<sup>1</sup>/ Financial aid for the conduct of the parasite program was supplied by the following State agencies: The departments of agriculture of Iowa and Wisconsin and the agricultural experiment stations of Indiana, Maryland, and Wisconsin. The following State agencies assisted in the release of parasites: The agricultural experiment stations of Indiana, Iowa, Kentucky, Maryland, Missouri, New York, Ohio, and Wisconsin, the Virginia Truck Experiment Station, the Illinois Natural History Survey, and the State Departments of agriculture of Iowa, Minnesota, and New Jersey.

Table 1.--Number of parasites of the European corn borer released in the United States in 1947

State	<u>Chelonus</u> <u>annulipes</u> Wesm.	<u>Eulophus</u> <u>viridulus</u> Thoms.	<u>Horogenes</u> <u>punctorius</u> (Roman)	<u>Lydella</u> <u>stabulans</u> var. <u>grisescens</u> R. & D.	<u>Macrocentrus</u> <u>gifuensis</u> Ashm.	Total
Illinois	-	-	989	2,334	35,467	38,790
Indiana	481	1,975	768	4,947	22,390	30,561
Iowa	1,472	3,969	2,906	25,489	257,020	290,856
Kentucky	-	1,932	249	983	3,772	6,936
Maryland	690	-	980	1,981	62,101	65,752
Massachusetts	-	1,979	-	-	-	1,979
Michigan	-	-	-	-	3,920	3,920
Minnesota	-	982	488	1,457	9,550	12,477
Missouri	-	-	468	995	18,854	20,317
New Jersey	-	-	-	-	15,743	15,743
New York	-	-	-	993	5,655	6,648
North Carolina	-	1,968	-	-	-	1,968
Ohio	-	1,986	499	994	6,256	9,735
Pennsylvania	-	-	500	493	1,960	2,953
Virginia	-	3,974	-	-	48,252	52,226
Wisconsin	-	950	858	2,476	19,730	24,014
Total	2,643	19,715	8,705	43,142 1/	510,670	584,875

1/ 3,895 were shipped to Canada and released in New Brunswick.

Table 2.--Total numbers of exotic species of parasites of the European corn borer released in the United States up to November 1, 1947

State	<u>Apanteles</u> sp.	<u>Apanteles</u> <u>thompsoni</u> Lyle	<u>Aplomya</u> <u>mitis</u> Meig.	<u>Dracon</u> <u>atricornis</u> (Smith)	<u>Campoplex</u> <u>multicinctus</u> Grav.	<u>Campoplex</u> <u>pyraustae</u> Smith	<u>Chelonus</u> <u>annulipes</u> Wesm.	<u>Cremastus</u> <u>flavoorbitalis</u> Cam.
Connecticut	-	21,268	178	12	-	1	54,105	1,483
Delaware	-	-	-	-	-	-	2,229	-
Illinois	-	-	-	-	-	-	1,381	-
Indiana	-	5,700	8	-	-	-	7,496	-
Iowa	-	-	-	-	-	-	3,982	-
Kentucky	-	-	-	-	-	-	-	-
Maine	-	-	-	-	-	-	-	-
Maryland	-	-	-	-	-	-	3,966	-
Massachusetts	388	69,139	514	127	1,129	1,697	16,010	6,762
Michigan	-	34,837	395	-	-	-	6,363	-
Minnesota	-	-	-	-	-	-	-	-
Missouri	-	-	-	-	-	-	-	-
New Hampshire	-	-	-	-	-	-	-	-
New Jersey	-	-	-	-	-	-	9,585	1,192
New York	3	51,106	463	-	61	16	137,821	1,109
North Carolina	-	-	-	-	-	-	-	-
Ohio	-	52,505	1,664	-	357	38	22,952	5,145
Pennsylvania	-	5,774	20	-	-	-	-	-
Rhode Island	-	11,756	188	211	123	47	7,523	1,014
Vermont	-	-	-	-	-	-	6,982	-
Virginia	-	-	-	-	-	-	11,388	2,971
Wisconsin	-	-	-	-	-	-	701	-
Total	391	252,085	3,430	350	1,670	1,799	292,484	19,676



Table 2.--Continued

State	Campoplex alkae (Ell. & Sacht.)	Eulophus viridulus Thoms.	Exeristes roborator Fab.	Horcogenes punctorius (Roman)	Lydella stabulans var. <i>grisea</i> R. & D.	Macrocentrus gifuensis Ashm.	Meteorus nigricollis Thoms.
Connecticut	1,057	17,200	-	6,882	42,723	23,970	-
Delaware	-	6,000	-	3,959	3,179	81,789	-
Illinois	-	2,961	2,302	5,273	14,527	146,614	-
Indiana	5,161	8,646	22,905	10,224	37,121	124,837	-
Iowa	-	14,489	-	14,216	51,525	568,788	-
Kentucky	-	2,834	-	1,148	2,434	16,399	-
Maine	-	-	-	-	1,927	-	-
Maryland	-	5,833	-	7,123	18,563	175,693	-
Massachusetts	28,526	88,494	54,957	30,938	92,087	82,444	-
Michigan	24,075	44,037	86,667	11,987	121,219	44,710	-
Minnesota	-	3,982	-	1,323	3,932	22,050	-
Missouri	-	-	-	468	995	18,854	-
New Hampshire	-	-	-	593	5,569	-	-
New Jersey	-	8,507	-	4,349	9,111	108,445	-
New York	9,279	57,341	40,050	17,994	127,312	107,503	-
North Carolina	-	1,968	-	481	902	7,889	-
Ohio	36,398	103,634	87,826	45,987	220,896	152,951	-
Pennsylvania	550	3,994	20,119	3,290	14,072	91,587	-
Rhode Island	4,636	7,446	-	14,572	35,293	39,182	8
Vermont	-	-	-	2,279	9,813	-	-
Virginia	-	3,974	-	4,325	8,148	106,457	-
Wisconsin	-	2,800	-	4,040	7,538	57,547	-
Total	109,682	384,140	314,766	191,451	828,886	1,977,709	8

Table 2.--Continued

State	<u>Microbracon</u> <u>brevicornis</u> Wesm.	<u>Microgaster</u> <u>tibialis</u> Nees.	<u>Nemeritis</u> <u>floralis</u> (Fall.)	<u>Phaenogenes</u> <u>nigridens</u> Wesm.	<u>Phorocera</u> <u>erecta</u> Coq.	<u>Pseudoperichaeta</u> <u>roseanae</u> (E. & B.)	Total
Connecticut	4,952	7,101	533	1,620	193	7,754	191,032
Delaware	-	-	-	-	-	-	97,156
Illinois	3,635	-	-	-	-	-	176,693
Indiana	105,109	8,985	-	-	-	8,526	344,718
Iowa	-	-	-	500	-	-	653,500
Kentucky	-	-	-	-	-	-	22,815
Maine	-	-	-	-	-	-	1,927
Maryland	1,616	-	-	-	-	-	212,794
Massachusetts	1,084,590	84,689	371	21,885	844	64,755	1,730,346
Michigan	534,334	81,747	-	3,933	-	17,896	1,012,140
Minnesota	-	-	-	-	-	-	31,287
Missouri	-	-	-	-	-	-	20,317
New Hampshire	-	-	-	-	-	-	6,162
New Jersey	11,857	1,809	-	4,037	-	-	158,892
New York	354,265	34,752	-	569	4	29,743	969,391
North Carolina	-	-	-	-	-	-	11,240
Ohio	587,583	138,585	843	8,306	499	32,334	1,498,503
Pennsylvania	127,305	6,842	-	347	-	3,800	277,700
Rhode Island	-	19,740	-	12,037	-	9,305	163,081
Vermont	-	-	-	-	-	-	19,074
Virginia	5,157	3,199	-	-	-	-	145,619
Wisconsin	-	-	-	-	-	-	72,626
Total	2,820,403	387,449	1,747	53,234	1,540	174,113	7,817,013

